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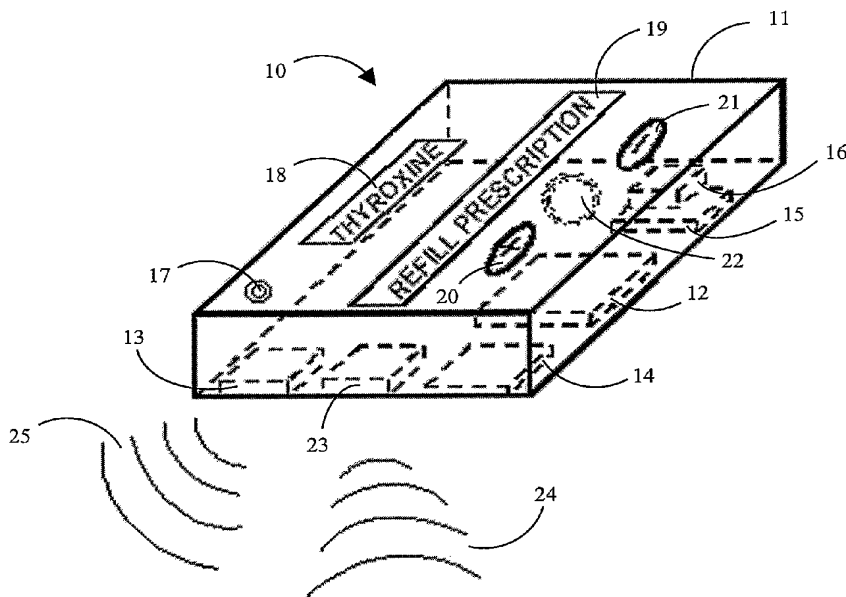
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PILL DISPENSING REMINDER CAPABLE OF COMMUNICATING WITH A REMOTELY SITUATED COMPUTER



(57) Abstract: A medicament reminder (10) for keeping a patient informed of medicament related matter which is capable of communicating with a remotely situated computer through the Use of wireless technology. A microprocessor (12) is held in a case and includes a wireless transceiver (23). The reminder may receive data messages from the computer informing its user of important medical data while also enabling the user to transmit data messages to the computer. Data messages transmitted from the reminder to the computer include response request inquiries pertaining to specific medical issues a patient may have. A warning indicator held by the case may output a signal at triggered warning events.

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## 1 S P E C I F I C A T I O N S

2

3 PILL DISPENSING REMINDER CAPABLE OF COMMUNICATING WITH A REMOTELY  
4 SITUATED COMPUTER

5

## 6 BAKDGROUND OF THE INVENTION

7 The field of the invention is medicament reminders and the  
8 invention relates more particularly to a reminder for informing a  
9 patient of important information pertaining to medicaments.

10 There has been a long term trend of developing new drugs and  
11 nutritional supplements which have greatly improved the control  
12 of diseases as well as improving the health of the patient.  
13 Additionally, there has also been a long term increase in human  
14 life expectancy. The combination of these trends has led to both  
15 a requirement for taking more than one medicine by a patient as  
16 well as a tendency for the patient to be of advanced years and in  
17 need of assistance in keeping informed of important information  
18 pertaining to the medicines which they are taking or need to  
19 take.

20 For example, a patient may be compelled to regularly take a  
21 medication, such as thyroxine, throughout the course of their  
22 life. This would require that they continuously refill the  
23 prescription each time it ran low. Unfortunately, many patients  
24 often forget to order the refill until the medicament is totally  
25 consumed and a few days have passed by. This results in the  
26 patient having deprived themselves of needed medication which, in  
27 some cases, can be extremely dangerous to their health.  
28 Moreover, in situations where the patient is extremely busy,  
29 naturally forgetful, elderly, or taking a few medicines at the  
30 same time, the chances for greater delays in refilling a needed  
31 prescription(s) increases tremendously.

32 Numerous pill dispensing systems have been devised in an  
33 effort to help patients remember when to take a specific  
34 medication. One such device is shown in U.S. Patent No.

1 processed response would effectively operate pertains to matters  
2 of medicament compatibility.

3 For example, a patient may need to know whether a particular  
4 medicament is compatible with other medicament(s) they have taken  
5 or are planning to take. Given the danger in taking medications  
6 that are incompatible with other medications, this issue is of  
7 significant importance and warrants immediate feedback. For such  
8 occurrences, the remotely situated computer 30 may contain a  
9 database consisting of pre-programmed data which can determine  
10 the compatibility of one medicament to another. All the patient  
11 would have to do is input (into the reminder 10) data pertaining  
12 to the medicament(s) they are intending to take and transmit 25  
13 it to the remotely situated computer 30 (reference character 32).  
14 The computer 30, in return, would generate a response by cross-  
15 referencing the received data with information contained in its  
16 database. Additionally, by further accessing the patient's  
17 medical record, the computer 30 may be able to provide a more  
18 detailed response in accordance with the patient's listed medical  
19 dispositions. The response would then be processed into a  
20 message and transmitted 31 from the computer 30 to the patient's  
21 reminder 10 (reference character 24).

22 The patient may likewise undergo a similar process for  
23 determining whether they may even take a particular medicament(s)  
24 on account of a pre-existing health condition(s). For example,  
25 if the patient has high blood pressure, they would transmit 25 a  
26 data message inquiring whether a particular medicament(s) may be  
27 taken in light of that condition. After receiving 32 the  
28 message, the remotely situated computer 30 would access data on  
29 the requested medicament(s) for determining whether it can cause  
30 high blood pressure. The response would thereafter, be processed  
31 and transmitted 31 to the patient's reminder 10 (reference  
32 character 24). In this manner, a patient may attain proper  
33 confirmation of a medicament related compatibility issue at the  
34 moment that issue arises, regardless of whether the medical  
35 facility is open or occupied by any personnel at the computer 30.

1           a combination thereof.

2

3   22. A system for communicating between a remotely situated  
4       computer and a medicament reminder, said system comprising:

5           a medicament reminder that is kept within the  
6       possession of a patient and comprising:

7           a case for supporting circuitry;

8           a microprocessor which processes data;

9           a memory element which stores data;

10          a transceiver that is capable of communicating  
11       with said remotely situated computer via the use of  
12       wireless technology;

13          a power element which provides electrical energy  
14       to said microprocessor; and

15          a remotely situated computer which is configured to  
16       communicate with said reminder via the use of wireless  
17       technology.

18

19   23. The system of Claim 22, wherein said data transmitted from  
20       said remotely situated computer to said reminder is  
21       generated in accordance with input from personnel operating  
22       said computer.

23

24   24. The system of Claim 22, wherein said data transmitted from  
25       said remotely situated computer to said reminder is  
26       generated solely by said computer in accordance with a  
27       program protocol.

28

29   25. The system of Claim 22, wherein said remotely situated  
30       computer is located within a medical facility.

31

32   26. The system of Claim 25, wherein said medical facility is a  
33       pharmacy, a hospital, a medical office, a learning  
34       institution, or a combination thereof.

35

1 27. The system of Claim 22, wherein said communication comprises  
2 a task reminding message, a message pertaining to medicament  
3 compatibility, an advertisement, or a combination thereof.  
4

5 28. A method of communication between a medicament reminder and  
6 a remotely situated computer, said method comprising the  
7 steps of:

8 providing a user with a medicament reminder, said  
9 reminder capable of transmitting data, receiving data, or a  
10 combination thereof, via the use of wireless technology, and  
11 configured to communicate with a remotely situated computer  
12 via the use of said wireless technology;

13 establishing a remotely situated computer capable of  
14 transmitting data, receiving data, or a combination thereof,  
15 via the use of wireless technology, and configured to  
16 communicate with said medicament reminder via the use of  
17 said wireless technology.

18 creating a data communication to be transmitted;

19 transmitting said data communication to said medicament  
20 reminder or said remotely situated computer.  
21

22 29. The method of Claim 28, wherein said communication comprises  
23 a task reminding message, a message pertaining to medicament  
24 compatibility, an advertisement, or a combination thereof.  
25

26 30. The method of Claim 28, wherein said remotely situated  
27 computer is located within a medical facility.  
28

29 31. The method of Claim 30, wherein said medical facility is a  
30 pharmacy, a hospital, a medical office, a learning  
31 institution, or a combination thereof.  
32  
33  
34  
35

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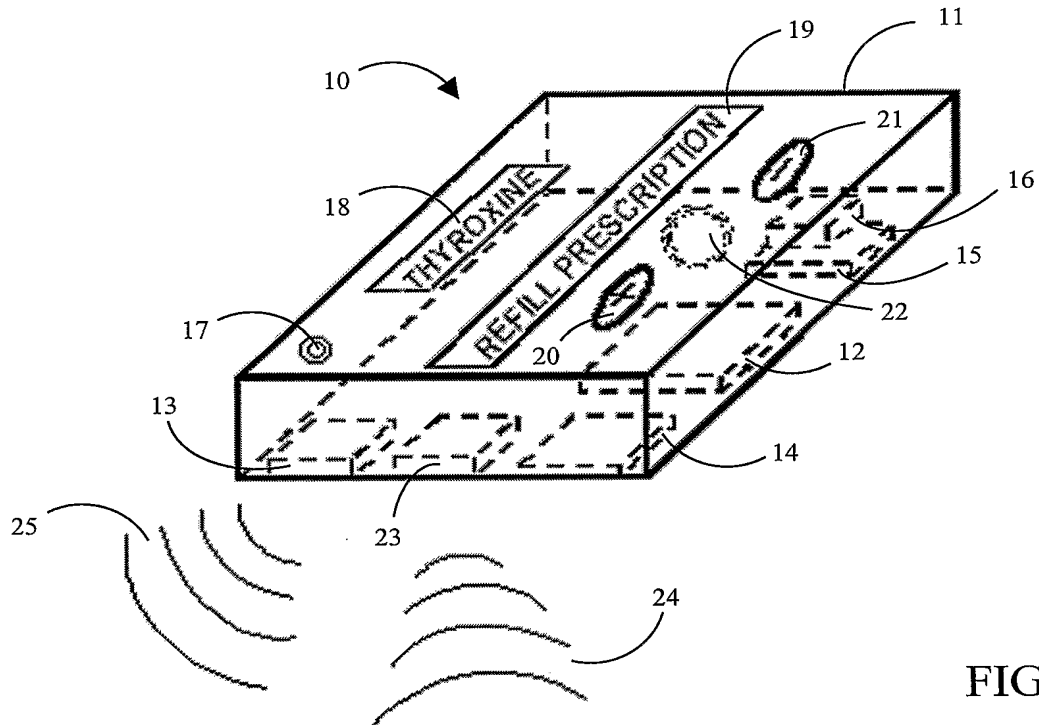


FIG. 1

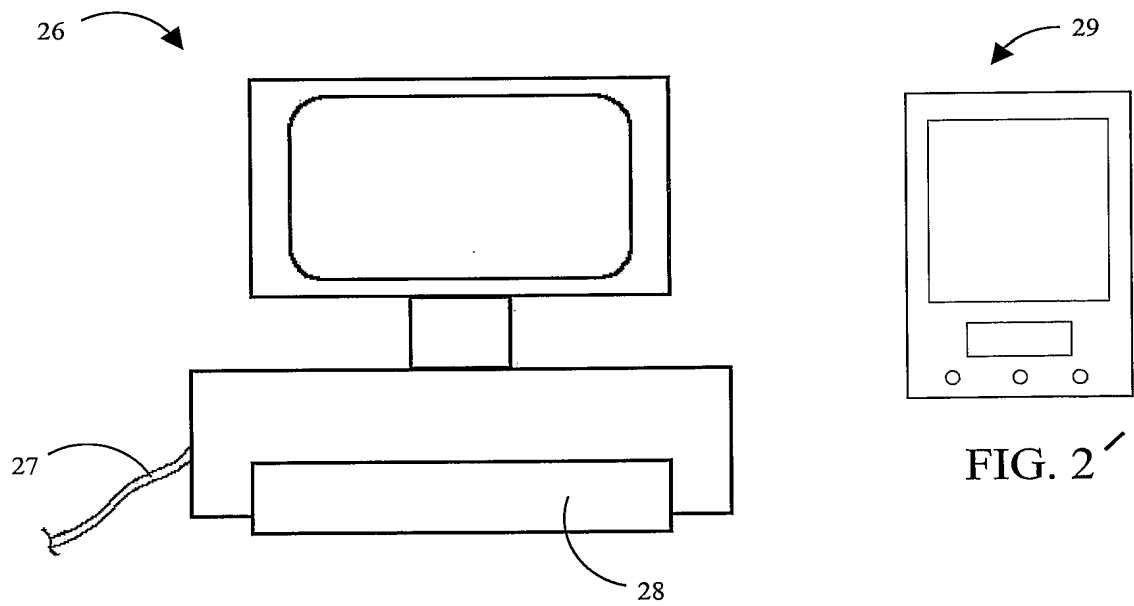


FIG. 2

FIG. 2'

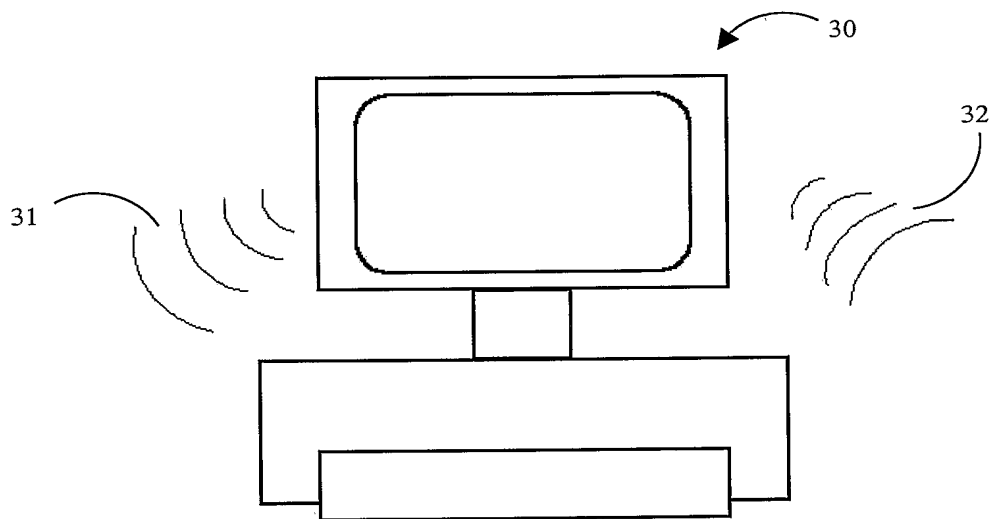


FIG. 3

MESSAGE TEMPLATE MENU

33 1. Order Prescription Refill?

36 • Enter medicament name or prescription number

34 2. Request Medicine Compatibility Evaluation?

37 • Enter medicaments to be taken

38 • Enter medical pre-conditions  
(e.g. high blood pressure, allergies, etc.)

35 3. Request an Appointment?

39 • Enter Dr's name or Identification Code

40 • Enter Reason for Requesting Appointment

41 • Enter Requested Appointment Date & Time

FIG. 4

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/09931

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G 06 F 17/60

US CL : 705/2

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
U.S. : 705/2

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
West 2.0: medicament, drug, prescription, reminder; alert, wireless, remotely, computer, microprocessor

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,406,426 B1 (REUSS et al.) 18 June 2002, Col.3, lines 15-67; Col.6, lines 2-67	1-31
X	US 6,588,670 B2 (BUKOWSKI) 8 July 2003, Col.3, lines 15-67; Col.5, lines 5-67	1-31
A	US 5,845,255 A (MAYAUD) 1 December 1998, Col.29, lines 17-67	1-31



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:		"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier application or patent published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
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"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

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